

## **REMARKS**

This paper is being provided in response to the Final Office Action dated December 11, 2008, for the above-referenced application. In this response, Applicant has cancelled claims 2, 3, 26 and 27 (claims 13-24 and 30 having been previously cancelled) without prejudice or disclaimer of the subject matter thereof and amended claims 1, 6, 25, 28 and 29 to clarify that which Applicant considers to be the presently-claimed invention. Applicant respectfully submits that the amendments to the claims are fully supported by the originally-filed specification, consistent with the discussion herein.

Applicant notes that claims 4, 5 and 8-12 have been maintained in the application in withdrawn status and submits that upon allowance of a base generic claim, these claims should be rejoined to the application and also allowed as provided under MPEP 821.04 and 37 C.F.R. 1.141.

The rejection of claims 1, 2, 13, 14, 25-27, 29-30 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,965,360 to DeCaro, et al. (hereinafter "DeCaro") is hereby traversed and reconsideration is respectfully requested in view of the amendments to the claims contained herein. Applicant notes that claims 2, 26 and 27 have been cancelled herein but the subject matter thereof incorporated into their base independent claims. Applicant also notes that claim 30 has been previously cancelled.

Independent claim 1, as amended herein, recites a current-drive apparatus for a display panel. A plurality of current-drive circuits are included, each of said plurality of current-drive

circuits including first and second terminals, a reference resistor connected between said first and second terminals and a reference current generation circuit to produce at least one internal reference current responding to a voltage generated based on the reference resistor. A current source and said plurality of current-drive circuits are connected such that a current flowing through said current source becomes substantially equal to a current flowing through said reference resistor of each of said current-drive circuits, wherein a current flowing through said reference resistor in a first one of said current-drive circuits flows through said reference resistor in a second one of said current-drive circuits, and wherein said current drive circuits are coupled in series in a manner that said first terminal of a preceding one of said current drive circuits is connected to the second terminal of a succeeding one of said current-drive circuits which is adjacent to the preceding one of said current-drive circuits. At least one of said plurality of current-drive circuits further includes at least one current adjustment resistor that operates such that a reference voltage generated across said reference resistor is applied across said at least one current adjustment resistor to generate said at least one internal reference current. Claims 4-12 and 29 depend directly or indirectly from independent claim 1.

Independent claim 25, as amended herein, recites a current-drive system for a display panel including first and second power source lines. A plurality of current-drive ICs are included, each of said plurality of current-drive ICs having first and second terminals and having a first resistor connected between said first and second terminals. A current source is connected to said plurality of current-drive ICs so that said ICs and said current source are connected in cascade with said first and second terminals between first and second power source lines, wherein said ICs are coupled in series between said first power source line and said current

source in such a manner that the second terminal of a preceding one of said ICs is connected to the first terminal of a succeeding one of said ICs. At least one of said plurality of current-drive ICs produces an internal reference voltage based on a voltage generated across said first resistor, and wherein at least one of said plurality of current drive ICs further includes a second resistor having a first end coupled to one end of the first resistor and having a second end coupled to the other end of the first resistor. Claim 28 depends from independent claim 25.

DeCaro discloses a method of current matching in integrated circuits. In Fig. 7, DeCaro shows the driver circuit 720 electrically connected to the driver circuit 710. The drive circuit 720 is electrically connected to the driver circuit 710 through the current mirror circuit 714.

Applicant notes that in connection Applicant's recited reference resistor (first resistor), the Office Action identifies resistor elements 240 and 242 in Figure 2 of DeCaro (see, for example, items 3, 4, 6 and 7 in the Office Action). However, the Office Action also identifies resistor elements 240 and 242 as a current adjustment resistor in rejecting Applicant's recited features involving at least one current adjustment resistor (see for example, item 5 of the Office Action). As discussed herein, and in accordance with amendments made herein, Applicant submits that the reference resistor and the current adjustment resistor recited by Applicant are not the same resistor and that DeCaro does not teach or fairly suggest at least the features recited by Applicant involving a reference resistor (or first resistor) and a current adjustment resistor (or second resistor).

Applicant's independent claim 1 has been amended to recite that at least one of said plurality of current-drive circuits further includes at least one current adjustment resistor that operates such that a reference voltage generated across said reference resistor is applied across said at least one current adjustment resistor to generate said at least one internal reference current. Independent claim 25 has also been amended to include related features. Applicant submits that the amended independent claims describe two resistors having different characteristics and functionalities and, accordingly, are not the same resistor. In particular, for example, Applicant points out that the internal reference current is decided according to the ratio of the reference resistor (first resistor) and the adjustment resistor (second resistor). In this case, the reference resistor (first resistor) and the adjustment resistor (second resistor) may be composed in the same IC in each drive circuit. Through use of the reference resistor (first resistor) as a voltage drop resistor, a uniform amount of current generated by reference to the reference current provided by the reference current source can be caused to flow within each of the current-drive ICs. (See, for example, Figure 5 and page 13, line 5 to page 15, line 10 of the originally-filed specification.)

Accordingly, Applicant submits that DeCaro does not teach or fairly suggest the features recited by Applicant involving a reference resistor (or first resistor) and at least one current adjustment resistor that operates such that a reference voltage generated across said reference resistor is applied across said at least one current adjustment resistor to generate said at least one internal reference current (or a second resistor having a first end coupled to one end of the first resistor and having a second end coupled to the other end of the first resistor). In view of the above, Applicant respectfully request that the rejection be reconsidered and withdrawn.

The rejection of claims 3, 6, 7, 15, 16 and 28 under 35 U.S.C. 103(a) as being unpatentable over DeCaro in view of U.S. Patent No. 6,188,395 to Yatabe, et al. (hereinafter "Yatabe") is hereby traversed and reconsideration is respectfully requested in view of the amendments to the claims contained herein. Applicant notes that claim 3 has been cancelled herein and that claims 15 and 16 have been previously cancelled.

The features of independent claims 1 and 25 are discussed above in connection with DeCaro. Claims 6, 7 and 28 depend therefrom.

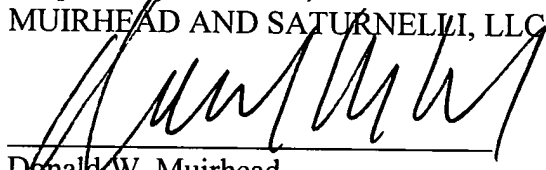
Yatabe discloses a power source circuit, a power source for driving a liquid crystal display and a liquid crystal display device. The Office Action cites to Yatabe as disclosing that a reference resistor of a current-drive circuit located on the side of a high voltage supply is connected to the high voltage supply through a voltage adjustment resistor and a reference resistor of a current-drive circuit located on the side of a low voltage supply is connected to the current source, citing to Fig. 1 and col. 7, lines 1-20 of Yatabe.

Applicant respectfully submits that Yatabe does not overcome the above-noted deficiencies of the DeCaro reference with respect to Applicant's present claims. Yatabe does not disclose, nor is Yatabe cited by the Office Action in connection with, Applicant's recited features that are discussed above with respect to DeCaro. Accordingly, Applicant respectfully submits that DeCaro and Yatabe, taken alone or in combination, do not teach or fairly suggest at least the

above-noted features as claimed by Applicant. In view of the above, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Based on the above, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 508-898-8603.

Respectfully submitted,  
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